Exhibit 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SAMSUNG ELECTRONICS CO. LTD., SAMSUNG ELECTRONICS
AMERICA, INC., AND APPLE, INC.,
Petitioner,

v.

NEONODE SMARTPHONE LLC,
Patent Owner.

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Case IPR2021-00144
Patent 8,095,879

_____

CORRECTED PATENT OWNER RESPONSE

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2010	U.S. Publication No. 2004/0021643 [Hoshino]
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2033	Wikipedia – Apple iPhone release dates [Wikipedia-iPhone-Release-Dates]
2034	Wikipedia – Samsung Galaxy release dates [Wikipedia-Samsung Galaxy-Release-Dates]
2035	Response to Non-Final Office Action of Application No. 10/315,250 (later issued as U.S. Patent 8,095,879), submitted Mar. 14, 2008. [2008-03-14 Office-Action-Response]
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I.   INTRODUCTION[1]

The '879 patent, filed in 2002 with claims directed towards a gliding-based user interface, is not just any patent, nor is Neonode just any patent owner. When Neonode introduced its N1 phone in 2002—five years before Apple's iPhone and seven years before Samsung's Galaxy—it was widely recognized as the first smart phone to use swipe gestures:
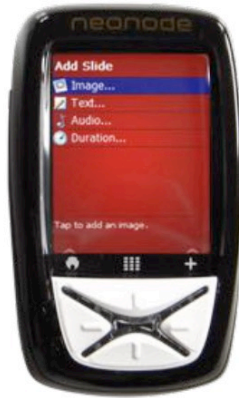
Figure 3. The Neonode N1 was the first mobile to use swipe gestures [46]

Ex. 2020 [Hollatz-Dissertation] 8; *see also* Section II.A.1 (additional evidence). The N1, and its swiping user interface in particular, was widely praised in gushing terms. Industry observers called it "simply amazing," "extremely intuitive," and

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[1] Based on agreement between the parties and approval from the Board (*see* Board email dated February 25, 2022, Ex. 2037), the Petition is limited to Grounds 2A-2D only.

nothing like the "dreaded gestures" of prior pen-based systems, like the references Petitioners rely upon here.

While Petitioner Samsung now contends that the '879's claims are invalid, it sang a far different tune in 2005 when the head of Samsung's mobile telecom division visited Neonode and proclaimed that Neonode's intuitive user interface was "the future of mobile phones." Ex. 2026 [Bystedt-Decl.] ¶ 9. Shortly thereafter, Samsung licensed the application that later issued as the '879 Patent, only to later infringe the patent once the license agreement expired.

Against *this* patent, Petitioners recycle an old, stylus-based reference (Hirayama-307)—a quintessential example of the aforementioned "dreaded" pen-based systems—that was already carefully considered by the examiner during prosecution. While the examiner found Hirayama-307 to be "pertinent to [the] applicant's disclosure," it was too far afield to be a basis of any rejection. Ex. 2009 [2006-03-23 Non-Final Rejection] 15. And for good reason—as Hirayama-307 fails to disclose many limitations of the claimed invention.

First, the claims require a "gliding … away" gesture to "activate" a function but Petitioner relies upon Hirayama-307's drag-and-drop operation, the likes of which the Applicant made perfectly clear in prosecution is distinct from the "gliding … away" limitation:

> ***Hoshino does not teach gliding*** a finger ***away*** from an icon. ***Instead,***
> ***Hoshino teaches a drag-and-drop operation*** for moving an icon.

Ex. 1003 [Prosecution-History] 171*; see* Section III.A, *infra*.

Second, Petitioner also fails to demonstrate that the claimed requirement that

the "representation of the function" ***not*** be "relocated or duplicated" during the

"gliding … away" of the "object" (*e.g.*, finger) is obvious because Hirayama-307

makes clear that its icon's "display coordinate position ***is moved in accordance***

with the movement of the position coordinate of the point of ***the pen.***"—*i.e.*, it is

"relocated or duplicated." Ex. 1006 [Hirayama-307] 2:5-13. And as the Board

already found, a POSITA would not have been motivated to combine Hirayama-

307 with Ren to meet this limitation. Paper 24, 20. *See* Section III.B, *infra*.

The Petition also fails to disclose or render obvious dependent claims 6 and

15 for yet additional reasons. *See* Sections IV and V, *infra*.

For all of these reasons, the claims should be affirmed.

II. SECONDARY INDICIA OVERWHELMINGLY SUPPORTS A FINDING OF VALIDITY.

"Objective indicia of non-obviousness 'can be the most probative evidence

of non-obviousness in the record, and enables the court to avert the trap of

hindsight.'" *Institut Pasteur v. Focarino*, 738 F.3d 1337, 1346 (Fed. Cir. 2013);

Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1538 (Fed. Cir. 1983)

("secondary considerations may often be the most probative and cogent evidence

in the record. It may often establish that an invention appearing to have been

obvious in light of the prior art was not."). Such "objective evidence... 'is not just

a cumulative or confirmatory part of the obviousness calculus but constitutes

independent evidence of nonobviousness.'" *Cheese Sys. v. Tetra Pak Cheese &*

Powder Sys., 725 F.3d 1341, 1353 (Fed. Cir. 2013). This is just such a case.

Neonode's N1 phone, introduced in 2002—five years before Apple's

iPhone—has been widely recognized by industry observers and the public alike as

the first commercial phone to implement a user interface based primarily on

swiping. Neonode's swipe-based user interface was widely praised too, described

by technology observers as, *inter alia*, "quite obviously unique," "compelling and

... a user experience simpler than pretty much anything else that comes to mind,"

"simple and brilliant," "advanced simplicity," and "extremely intuitive." Such

praise heaped upon the N1's swiping-based user interface, moreover, is directly

tied to the "gliding … away" user interface that is the subject of the '879's claims.

See Section II.A, *infra*.

In fact, while Petitioners now assert that the claims were simply obvious,

representatives of Petitioner Samsung were visibly impressed with the

demonstration of Neonode's technology and licensed the application that issued as

the '879 patent in 2005—only to later infringe the claims once the license expired.

See Section II.B, *infra*. With respect to Petitioner Apple, as one analyst observed

upon introduction of the first iPhone, "it must be vexing to see Apple essentially claim ownership of concepts the Neonode phone has been using for at least five years." Ex. 2013 [Pen-Computing-Magazine-N2-Phone-Review] 9.

A. Neonode's Innovative Swiping User Interface, Years Ahead Of Apple's And Samsung's Offerings, Received Substantial Industry Praise And Is The Subject Of The '879's Claims.

Neonode's N1 mobile phone was introduced in spring 2002 (Ex. 2026 [Bystedt-Decl.] ¶ 3) and its N2 was sold starting in 2007. Ex. 2022 [Martensson-Decl.] ¶ 6. From its inception, the core distinguishing feature of Neonode's phones was their swipe-based user interface. Neonode specifically touted its "specially designed interface" that allows "you to easily access the different applications by using simple sweeping gestures ... on the screen." Ex. 2008 [N2-Advertisement-Video] (00:27-00:35); *see also id.*, (00:45-00:51) ("And you can easily access all of the Neonode N2's content by using the seven available sweeps."). As Neonode explained, "there is nothing else you need other than your intuition." *Id.*, (01:20-01:27).

The swipe gestures touted in Neonode phones are the "gliding … away" gesture upon which the '879 patent and its claims are centered. Ex. 2023 [Shain-Decl.] ¶¶ 4-6; Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 40-41; Section III.A, *infra*. In the '879's Summary of the Present Invention, the patent identifies the problems the inventors sought to address, including:

> *It is a problem to provide a user-friendly interface* that is adapted to handle a large amount of information and different kinds of traditional computer-related applications on a small handheld computer unit.
>
> *It is a problem to provide a user interface that is simple to use, even for inexperienced users* of computers or handheld devices."
>
> ...
>
> *It is also a problem to provide a simple way to make the most commonly used functions for navigation and management available* in the environment of a small handheld computer unit.

Ex. 1001 ['879] 1:49-61. The '879, thus, is centered upon the problems of making a "user-friendly interface" for a handheld device that is "simple to use even for inexperienced users" and provides "a simple way to make the most commonly used functions for navigation and management available."

The claimed inventions address these problems by claiming a user interface for a mobile handheld computer unit that includes a touch sensitive area that includes a representation of a function, wherein the representation consists of only one option for activating the function and wherein an object (*e.g.*, a finger) touches the touch sensitive area where the representation is provided after which the "object," the finger in our example, "*glid[es] along* the touch sensitive area away from the touched location, wherein the representation of the function is not relocated or duplicated *during the gliding*."

In other words, functions are activated by simply using an object such as a finger to glide away from the representation of a function (*i.e.*, swiping), without relocating or duplicating the representation. And, as explained in detail in Section III.A.1, *infra*, the Applicant made abundantly clear that the "gliding" limitation of the claim is distinct from traditional "drag-and-drop" operations. *See also, e.g.,* Ex. 1003 [Prosecution-History] 171 ("***Hoshino does not teach gliding*** a finger ***away*** from an icon. ***Instead****, **Hoshino teaches a drag-and-drop operation*** for moving an icon.").

The Applicant also equated the "gliding ... away" motion with "swiping." Ex. 1003 [Prosecution-History] 269 ("a finger touches a touch-sensitive screen at a location where an icon for a function is displayed, and then rubs/swipes/glides along the touch screen away from the location without lifting the finger."); Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 41. The Applicant also specifically referenced and provided a link to its promotional video for a commercial embodiment, the Neonode N2 phone, and asked the Examiner to "view the demonstration video … prior to reviewing Applicant's arguments …." Ex. 2035 [2008-03-14 Office-Action-Response] 15-16; Ex. 2008 [N2-Advertisement-Video]. As the screen shots below from the video show, the "gliding … away" gesture is similar to what many today's systems refer to as a "swipe" gesture and is distinct from a drag-and-

drop operation. Specifically, the thumb is placed on a representation of a function

(an arrow) and through a swiping motion, the menu screen opens:
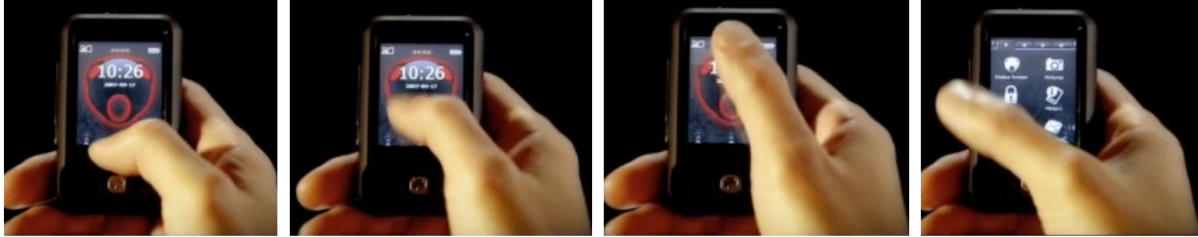
See Ex. 2008 [N2-Advertisement-Video] (screenshots from 00:26-00:27). Patent

Owner respectfully requests that the Board review the brief video for a

demonstration of the seamless "gliding … away" motion. Such gliding

corresponds to what is shown, for instance, in Figure 2 which shows a thumb

gliding along the touchscreen:
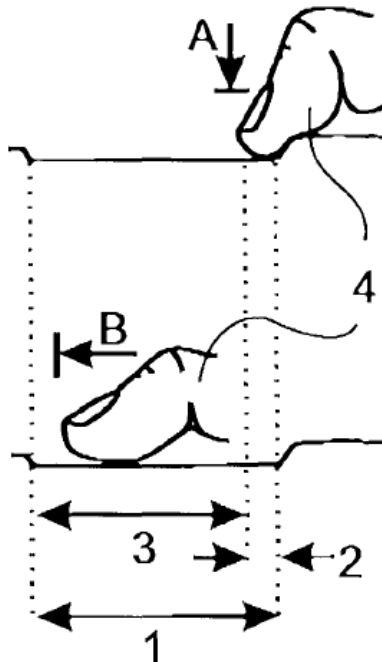
Fig. 2.

Addressing the problems of providing a "user-friendly interface" for a handheld device that is "simple to use even for inexperienced users" by activating functions via a simple glide (swipe) as claimed and as implemented in Neonode's N1 and N2 phones was widely praised. Pen Computing Magazine described Neonode N1 phone's swipe as "simple and brilliant" and "not" like the "dreaded gestures" of the pen computing devices (like Petitioner's Hirayama-307):

Swipe, swipe, swipe

You see, instead of the usual menus and pulldowns, most operations are performed by sweeps of your finger—usually your thumb—across the surface of the Neonode's display. […] ***If this sounds like the dreaded "gestures" that never really caught on in pen computing, it's not***. The swipes are much simpler, there are only a few, and they are consistently used throughout all applications. The idea here is to let you hold a phone in the palm of your hand and operate it entirely with your thumb. ***No need to*** push buttons, view tiny menus, ***pull out a tiny stylus***, or use scrollwheels, rockers or other such vexing miniature controls. […] ***Neonode's swiping interface is [] simple and brilliant***.

Ex. 2012 [Pen-Computing-Magazine-N1-Phone-Review] 2-3. As the article concludes:

What's the bottomline? ***The Neonode phone is quite obviously unique***, ... ***The user interface is compelling*** and it's easy to see how just a bit more development could provide almost total consistency and thus ***a user experience simpler than pretty much anything else that***

> **comes to mind. The speed is simply amazing. That's the way a phone**
> **should operate**."

Id., 5.

Other technology reviewers in the field were similarly impressed with the
"extremely intuitive" swipe-based gesture (Ex. 2014 [Trend-Hunter-Article]),
calling it "advanced simplicity" (*id.*, 1). *See also* Exs. 2016 [tnkgrl-Media-post] 1
("I've been playing with my N1m on and off, and I'm very impressed! It's
definitely a best kept secret device – Neonode's touch-based user interface with
gesture recognition ... is extremely intuitive ..."); 2014 [Trend-Hunter-Article] 1
("[The N2] has the most advanced touchscreen available, and has no buttons ...
'Neonode N2 is designed for advanced simplicity. You do everything on-screen,
simply and conveniently, with just one finger,' Infibeam says. 'The combination
of an optical touch screen and specifically designed user interface makes access to
all features and content of your Neonode N2 both quick and easy.'"); 2015 [Trend-
Hunter-About], 2017 [tnkgrl-Media-About]; Ex. 2021 [iPhone-Killer] 2 ("the N2
from Neonode Inc. – is the strongest contender for the title of 'iPhone killer,' ...
'They've come out with a kick-ass device'... the [N1's] screen reacts to the
intuitive passage of a finger over the screen to initiate basic phone, Web browser
and multimedia functions."). Mr. Bystedt, who was at Neonode and involved in
marketing, likewise confirms that there were numerous articles about the N1

phone, particularly its gesture-based touch screen user interface. Ex. 2026 [Bystedt-Decl.] ¶ 3.

This well-deserved praise did not only come from observers. Following Neonode's demonstration of its N1 mobile handset in spring 2002 at the CeBIT trade show in Germany, Neonode and the N1 became famous in Stockholm and internationally. Ex., 2026 [Bystedt-Decl.] ¶ 3. In the Stockholm tech and startup business community at that time, Neonode's N1 was the talk of the town. *Id.* Furthermore, both Sir Christopher Gent, the CEO of Vodaphone, and senior executives from Samsung Mobile, came to Stockholm to meet with Neonode. *Id.*, ¶ 8. The excitement surrounding the phone was focused on its novel gesture-based user interface. Ex. 2024 [Backlund-Decl.] ¶¶ 11-12; Ex. 2026 [Bystedt-Decl.] ¶ 3.

Tellingly, Petitioner Samsung, in sharp distinction to its contention now that the '879's claims are obvious, recognized the novelty of Neonode's swipe-based user interface. Senior management at Samsung's mobile telecom division were extremely impressed by Neonode's N1, and in early 2005 began discussions with Neonode about licensing the N1's gesture-based user interface and touch screen technology. Ex. 2026 [Bystedt-Decl.] ¶ 9. Ki-Tai Lee (K. T. Lee), head of Samsung's mobile telecom division, presciently told Neonode that he believed Neonode's intuitive user interface was "the future of mobile phones." *Id.* Neonode had many hours of meetings with Samsung, including one in London,

attended by Marcus Bäcklund, Thomas Ericsson, and Per Bystedt. *Id.* Mr. Lee

told Samsung's negotiators—in Neonode's presence—that "we need this,"

referring to the Neonode's N1 gesture-based user interface and the license for the

user interface. *Id.* And, as described below, Petitioner Samsung put its money

where its mouth is, paying significantly to license Neonode's technology. *See*

Section II.B, *infra*.

Later, when Petitioner Apple introduced the first iPhone in 2007 (Ex. 2033

[Wikipedia-iPhone-Release-Dates]),[2] observers and others quickly recognized its

use of the brilliant and simple swipe interface that Neonode had developed and

introduced five years earlier:

> Listening to Apple's claims of all the patents covering the iPhone's user
> interface one might assume the iPhone broke completely new ground
> and went where no phone had ever gone before.

> That is not entirely so. Neonode, a small Swedish company ...
> announced the Neonode N1 back in 2002. ... It did not use a stylus
> either. Instead, it used a swipe and tap system on a novel touch screen
> that used a grid of infrared beams to sense finger movement.

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[2] Samsung did not introduce a gesture-based mobile phone until years after

Apple. Ex. 2034 [Wikipedia-Samsung Galaxy-Release-Dates].

... And if the iPhone's swipes and taps seem futuristic, they are not. Neonode has been using them since the first N1 came out. In fact, the company's Neno user interface is based entirely on swipes and taps.

Ex. 2013 [Pen-Computing-Magazine-N2-Phone-Review] 1. The author followed,

[I]t must be vexing to see Apple essentially claim ownership of concepts the Neonode phone has been using for at least five years.

Id., 9.

In fact, some users have gone so far as to make videos about how Neonode's "sweeping touch screen" was the "original," to the iPhone "copycat":
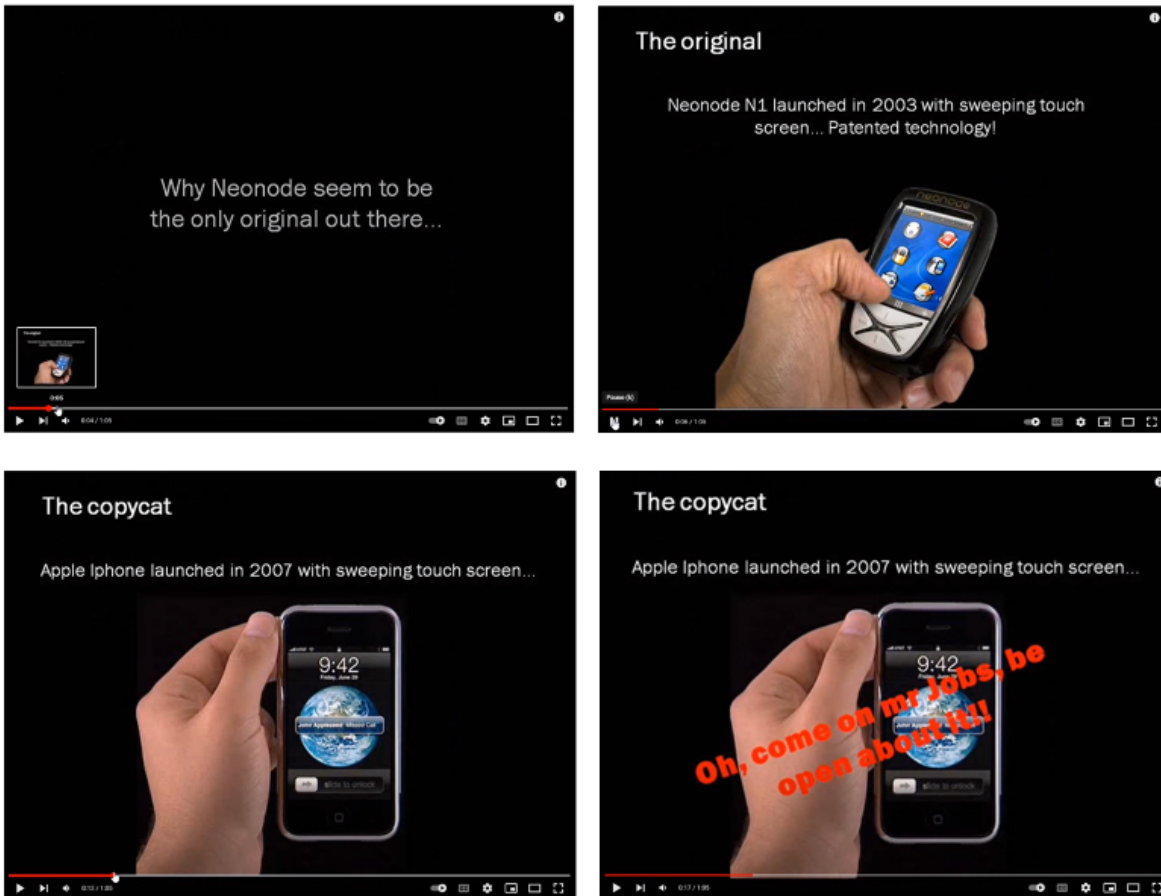
Ex. 2036 [User-Video] (at 0:04, 0:06, 0:12, and 0:17).

In accord, numerous academic papers and industry analysts recognized that Neonode's swipe-based user interface was *the* pioneer in the field, and the "first smartphone to support touch gestures":

Figure 11: The first smartphone to support touch gestures: The Neonode N1 [Source: http://www.gsmhistory.com/vintage-mobiles/fig-36-neonode-n1/]

Ex. 2018 [PhD-Dissertation] 9, *see also, id.*, ("The Neonode N1 (Figure 11), available in 2004, *was the first smartphone to use a touchscreen as primary input and to support touch gestures* for several functions.").

Another paper similarly recognized that "The Neonode N1was *the first mobile to use swipe gestures*":
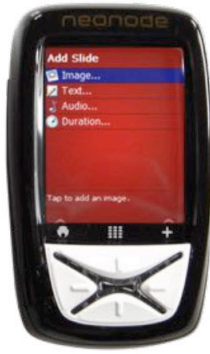
**Figure 3. The Neonode N1 was
the first mobile to use swipe
gestures** [46]

Ex. 2020 [Hollatz-Dissertation] 8, *see also, id.*, ("The Neonode N1 was the first

commercially available mobile device to make extensive use of swipe gestures

appropriate for one-handed use, including a browser that scrolled content vertically

with swipes."); Ex. 2029 [Neonode N1m video-review] 0:11-22 ("The reason I'm

reviewing the Neonode N1m is because it's an ancestor of the iPhone it is one of

the first devices to use purely a finger-based interface ..."); Ex. 2019 [Ars-

Technica-Article] 8 ("[Neonode's N1m] supported swiping gestures in addition to

individual taps.").

Neonode's N1 and N2's user interfaces were also widely praised by users,

particularly for their use of swiping. Just a small sampling of examples is below:

athanasiothegr8 10 years ago

My favorite phone. It has the fastest touchscreen and the most beautiful touch and an easy UI but the battery is weak and it has huge SAR.

👍 1 👎   REPLY

Michael Angelo 10 years ago

Neonode adapt their fast & responsive touchscreen on this phone, of which this company is famous for.

👍 👎   REPLY

NE0TIMELESS 3 years ago

I am still using it :) works perfect

👍 👎   REPLY

spaided 12 years ago

I have this phone and its GREAT!!! Not a single problem at all!!

👍 👎   REPLY

Ex. 2031 [Neonode-Comments-2];

Stormwolf420 10 years ago

I own this phone, it turns a lot of heads, and it's an EXCELLENT phone, too, the swiping is more intuitive than I thought, and once one gets the hang of it, this is the bets touch screen ever. I had to import mine from Malaysia, and was slapped with a HUGE import fee, but hell, for a phone as unique looking and as good as this one, it was worth every penny!

👍 👎   REPLY

Tom Goedkoop 13 years ago

well, it's just a good phone, the sweeping works great, and the connection with the network is good (sorry for my english, it's not my best class:P)

👍 👎   REPLY

> **Rayen Marzougui** 4 years ago
>
> im in 2017 and i love this phone
>
> 👍 👎   REPLY

Ex. 2030 [Neonode-Comments-1]; *see also* Ex. 2032 [Neonode-Comments-3].

As courts have recognized, such significant evidence of praise centered upon

the claimed "gliding ... away" user interface is compelling evidence of

nonobviousness. *Institut Pasteur*, 1347 ("[I]ndustry praise ... provides probative

and cogent evidence that one of ordinary skill in the art would not have reasonably

expected [the claimed invention].")]; *Apple Inc. v. Samsung Elecs. Co. Ltd.*, 839

F.3d 1034, 1053 (Fed. Cir. 2016) (*en banc*) ("[e]vidence that the industry

praised...a product that embodies the patent claims weighs against an assertion that

the same claimed invention would have been obvious."). Such praise is especially

probative where, as here, it comes from industry participants, including

competitors like Samsung. *Id.* ("Industry participants, especially competitors, are

not likely to praise an obvious advance over the known art."). *See* Ex. 2007

[Rosenberg-2nd-Decl.] ¶ 49.

B.   The Commercial Success And Licensing Of The Neonode Technology Further Demonstrates The Novelty Of The Claims.

As discussed, Petitioner Samsung, after meeting with Neonode, expressed

substantial interest in the swipe-based user interface and described it as "the future

of mobile phones" and Samsung recognized, "we need this." Ex. 2026 [Bystedt-Decl.] ¶ 9. This was not just talk. Samsung signed a license agreement in July 2005, licensing the application from which the '879 issued, and providing for a

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████████████████████. Ex. 2028 [Samsung-License-Agreement]; Ex. 2026 [Bystedt-Decl.] ¶ 10; Ex. 2024 [Backlund-Decl.] ¶¶ 13-14. Indeed, in 2020 and 2021, Samsung is reported to have sold 256.6 and 272 million units, respectively (Ex. 2041 [Smartphone-Shipments][4]), a total of 528.6 million units in just two years.

The interest from giants like Samsung was supported by the successful sales of Neonode phones. Neonode sold tens of thousands of its N1 and N2 phones to operators around the world, from Mexico to Belgium to India—which is

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[3] The agreement was executed in July 2005 when one euro was about $1.20 (specifically $1.2060 on July 18, 2005). https://www.macrotrends.net/2548/euro-dollar-exchange-rate-historical-chart (*see also* Ex. 2040 [Euro-Dollar-Exchange-Rate]). 2€ was equal to about $2.40 in 2005, or about $3.49 in 2022. *See* Ex. 2039 [Inflation-Calculator] (https://www.usinflationcalculator.com/)

[4] Available at https://www.idc.com/getdoc.jsp?containerId=prUS48830822.

impressive for a small startup company especially considering the facts that

Neonode did not have the backing of any cellular network carrier, did not have

manufacturing resources and had to sell its phone at up to $1,000, which was three

times the price of the most expensive phones of the time. Ex. 2022 [Martensson-

Decl.] ¶ 6; Ex. 2025 [Neonode-Sales]; Ex. 2028 [Samsung-License-Agreement];

Ex. 2026 [Bystedt-Decl.] ¶ 11; Ex. 2024 [Backlund-Decl.] ¶¶ 8-10; Ex. 2007

[Rosenberg-2nd-Decl.] ¶ 48.

Thus, secondary indicia strongly support the novelty of the claims.

III.   THE PETITION FAILS FOR TWO INDEPENDENTLY SUFFICIENT REASONS.

As discussed in Section II, Neonode's N1 and N2 phones were widely

praised for their innovative swiping user interface, introduced years before

Petitioners' offerings. Indeed, Samsung itself licensed the '879's application. *See*

Section II.B. Perhaps not surprisingly, Petitioners fail to demonstrate that the

proffered combination renders any of the claims obvious.

A.   The Claimed "Gliding … Away From The Touched Location" Is A Different Gesture From Hirayama-307's Drag-And-Drop.

The claims require "activating [a] function" via a "multi-step operation

comprising (i) an object touching the touch sensitive area at a location where the

representation is provided and then (ii) *the object gliding along the touch sensitive*

area away from the touched location ..." Ex. 1001 ['879] cl. 1.

During prosecution, the Applicant made clear that the claimed "gliding …

away" gesture is different from a "conventional" drag-and-drop operation, stating:

> ***Hoshino does not teach gliding*** a finger ***away*** from an icon. ***<u>Instead,</u>***
> ***Hoshino teaches a drag-and-drop operation*** for moving an icon.

Ex. 1003 [Prosecution-History] 171; *see* Section III.A.1. Petitioner relies solely on

Hirayama-307 as allegedly "disclos[ing]" the "gliding … away" limitation, Pet.,

58-59, but Hirayama-307 discloses the very same drag-and-drop operation the

Applicant distinguished. *See* Section III.A.2. Finally, Dr. Bederson's testimony

that Hirayama-307 discloses the "gliding ... away" limitation is entitled to little or

no weight because Dr. Bederson admitted he had neither reviewed the relevant

prosecution history nor formed an opinion on whether a drag-and-drop operation

discloses "gliding ... away." *See* Section III.A.3.

        1.   <u>The Prosecution History, Consistent With Plain Meaning And</u>
              <u>The Specification, Makes Clear That "Gliding … Away" Does</u>
              <u>Not Encompass "Drag-And-Drop" Operations.</u>

The "gliding ... away" limitation was added during prosecution and captures

an important element of the claimed invention. The Applicant, moreover, made

abundantly clear that "gliding ... away" is distinct from "drag-and-drop"

operations:

> ***Hoshino does not teach gliding*** a finger ***away*** from an icon. ***<u>Instead,</u>***
> ***Hoshino teaches a drag-and-drop operation*** for moving an icon.

Ex. 1003 [Prosecution-History] 171. In accord, the Applicant distinguished

Hoshino's "conventional" "drag-and-drop" "operation" from the "novel" "touch-

and-glide" operation of the "[c]laimed invention":

Some distinctions between claimed invention and Hoshino		
	Claimed invention	**Hoshino**
Objective	Novel touch-and-glide user interface operation	Discriminate between two conventional operations; namely, (1) touch, and (2) drag-and-drop

Id., 170.

Thus, the Applicant twice made clear that the "gliding ... away" limitation

did not encompass "drag-and-drop" operations. It is well-settled that these

statements operate as a prosecution disclaimer. The Board, for instance, found

essentially identical language—including the important word "instead" (*see* Ex.

1003 [Prosecution-History] 171)—to operate as a prosecution disclaimer in a

recent case:

> [W]e find no other way to interpret the applicants' arguments. As noted
> above, the applicants specifically stated that Candelore-II fails to
> disclose "DRM information including 'an offset value that points to the
> start of an encrypted block within an encoded frame'" and then stated
> that "[i]nstead," Candelore-II "discloses pointers that point to the
> location of encrypted portions of the video data relative to the file."
> *The applicants' argument specifically identifies the claim language*
> *at issue here and specifically says that it is not disclosed because*
> *Candelore-II discloses something else instead.*

Hulu LLC v. DivX LLC, IPR2021-01418, Paper 15, 24 (Mar. 15, 2022) (certain

emphasis added); *see also*, *id.*, 23 ("Critically, the very next sentence begins with

the word *instead*, and states, '*[i]nstead*, the Candelore patent discloses pointers

that point to the location of encrypted portions of the video data *relative to the*

file."). Notably, a disclaimer was found even though the plain meaning of the

claim was not found to require such a limitation. *Id.*, 19-20. *DivX* is fully in

accord with a long line of Board and Federal Circuit cases. *See, e.g.*, *Ford Motor*

Co. v. TMC Fuel Injection Sys., LLC, IPR2014-00272, Paper 36, 19 (June 22,

2015) ("In light of Applicant's unequivocal statements during prosecution, we

determine that there is an express disclaimer . . . for issued claims 38 and 40.");

Ford Motor Co. v. TMC Fuel Injection Sys., LLC, IPR2014-00273, Paper 15, 19

(June 22, 2015) (same); *Ford Motor Co. v. Vehicle Operation Techs., LLC*,

IPR2014-00594, Paper 26, 15-17 (Oct. 15, 2014) (similar); *Spectrum Int'l, Inc. v.*

Sterilite Corp., 164 F.3d 1372, 1378 (Fed. Cir. 1998) ("statements made by a

patent applicant during prosecution to distinguish a claimed invention over prior

art may serve to narrow the scope of a claim."); *see also Saffran v. Johnson &*

Johnson, 712 F.3d 549, 559 (Fed. Cir. 2013) ("applicants rarely submit affirmative

disclaimers along the lines of 'I hereby disclaim the following . . .' during

prosecution and need not do so to meet the applicable standard.").

But even if, *arguendo*, the Applicant's statements do not rise to the level of a disclaimer, the Applicant's clear explanation of the claimed "gliding … away" gesture as not encompassing a drag-and-drop operation informs the understanding of that term. *Iridescent Networks, Inc. v. AT&T Mobility, LLC*, 933 F.3d 1345, 1352 (Fed. Cir. 2019) (rejecting proposition that "prosecution history is irrelevant to ... claim construction ... because there is no clear and unmistakable disavowal of claim scope."). Thus, even if there were no disclaimer, a POSITA reviewing the Applicant's statements in prosecution would readily understand that the "gliding ... away" limitation does not encompass "drag-and-drop" operations. Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 54-57.

The rest of the intrinsic record further confirms that the "gliding ... away" limitation does not encompass drag and drop operations. The pending claims during prosecution originally recited "***moving*** in a direction ***from*** a starting point that is the representation [of a function] … ***to*** said display area." Ex. 1003 [Prosecution-History] 326. However, "in accordance with the conclusions of [an examiner] interview" and in order to "properly claim the present invention," the claims were amended to require the specific gesture of "***gliding*** … ***away*** from the location [of the representation of a function]." *Id*., 343. Thus, the claim was altered from any "moving in a direction from a starting point" to a specific gesture, "gliding ... away" to "properly claim the present invention." *See Ajinomoto Co. v.*

ITC, 932 F.3d 1342, 1351 (Fed. Cir. 2019) ("... when a word is changed during prosecution, the change tends to suggest that the new word differs in meaning in some way from the original word.") (internal citation and quotation omitted); *see also* Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 51.

As discussed in Section II.A, the Applicant also equated the "gliding ... away" motion with "swiping." Ex. 1003 [Prosecution-History] 269 ("a finger touches a touch-sensitive screen at a location where an icon for a function is displayed, and then rubs/swipes/glides along the touch screen away from the location without lifting the finger."); Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 52. The Applicant also specifically referenced and provided a link to its promotional video for a commercial embodiment, the Neonode N2 phone, and asked the Examiner to "view the demonstration video … prior to reviewing Applicant's arguments …." Ex. 2035 [2008-03-14 Office-Action-Response] 15-16; Ex. 2008 [N2-Advertisement-Video]. As the screen shots below from the video show, the "gliding … away" gesture is similar to what many today's systems refer to as a "swipe" gesture and is distinct from a drag-and-drop operation. Specifically, the thumb is placed on a representation of a function (an arrow) and through a swiping motion, the menu screen opens:
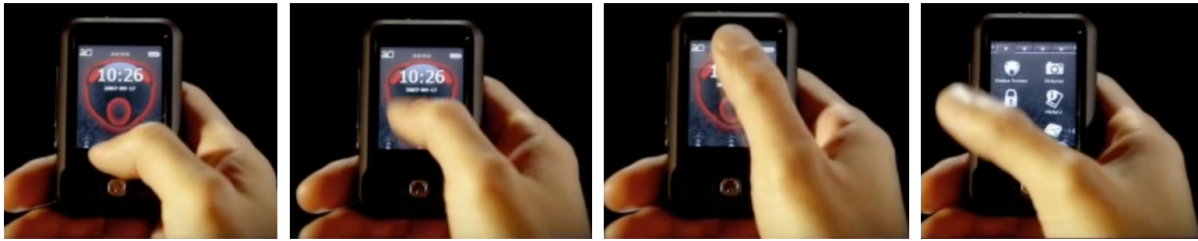
See Ex. 2008 [N2-Advertisement-Video] (screenshots from 00:26-00:27).

Similarly, just as with the aforementioned video showing a commercial

embodiment that practices the '879, the specification itself illustrates a gliding

motion as well:
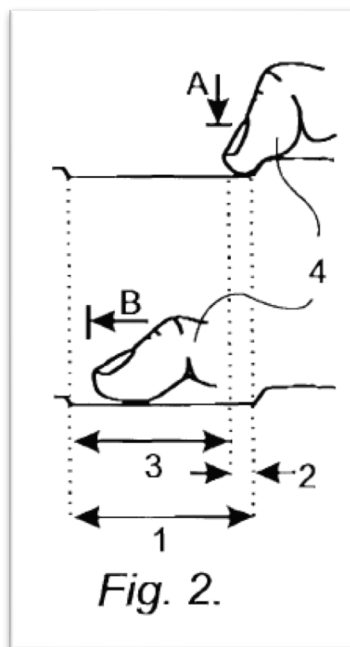
Fig. 2.

See Ex. 1001 ['879] Fig. 2, 4:7-11; Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 53.

Thus, the claimed "gliding … away" does not encompass a drag-and-drop

operation.

2.   Hirayama-307's "Drag-And-Drop" Operation Does Not
        Disclose The "Gliding … Away" Limitation.

Thus, the intrinsic record confirms that the claimed "gliding … away"

limitation does not include a "drag-and-drop" operation. The Petition relies on

Hirayama-307 alone as allegedly "disclos[ing]" the "gliding … away" limitation.

Pet., 58-59. Hirayama-307 was already carefully analyzed by the Examiner, who

explained that Hirayama-307 is "pertinent to applicant's disclosure," as it "teaches

a method of activating functions." Ex. 2009 [2006-03-23 Non-Final Rejection] 15.

Yet, the Examiner never relied upon Hirayama-307 as a basis of rejection, for good

reason because Hirayama-307 teaches (and Petitioner relies upon) a conventional

"drag-and-drop" operation, the very thing the Applicant made clear did not

constitute "gliding ... away."

As Dr. Rosenberg explains, Hirayama-307's user *drags* an application icon

43 *from* its location within *the hatched area 45* into the non-hatched area, and then

drops it into the non-hatched area at the specific location where the user wants the

application icon 41, by then "enlarged" into window 43, to be placed:

> Hirayama-307's operation is a "conventional" drag-and-drop
> "operation" referenced by the Applicant during prosecution.
> Specifically, when the user wishes to use Hirayama-307's dialing
> application, he/she moves the stylus to the application icon 41. Ex.
> 1006 [Hirayama-307] 2:1-4; 5:30-32. The user then drags the icon
> outside of the hatched area, into the non-hatched area. *Id*., 2:5-8; 5:39-

53. As the icon 41 is dragged outside of the hatched area, it is "enlarged as a window 43." *Id.*, 2:8-13; 5:59-66. The enlarged window 43 is then placed (*i.e.*, dropped) at the location within the non-hatched area where the user lifts the stylus. *Id.*, 2:8-13; 5:59-66. I have visually demonstrated Hirayama'307's drag-and-drop process in the figure below that I have created based on Hirayama-307's written description of its method:
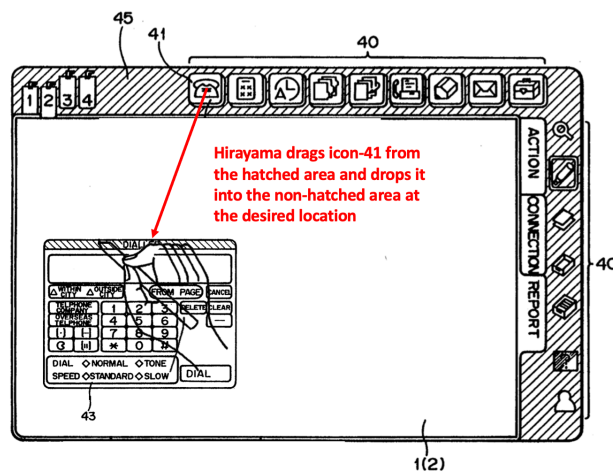
It should also be noted that while Petitioner disputes whether Hirayama-307 provides feedback to the user by visually showing icon 41 as being dragged during the entirety of the dragging process, Pet., 60-62, this is irrelevant to the fact that Hirayama-307's gesture is a drag-and-drop operation. From the perspective of the user, some form of Hirayama-307's dialing application is logically dragged (and behaves as if it is being logically dragged) with the movement of the stylus, and is dropped at the location where the stylus leaves the screen. It is true that, as I will explain in paragraphs 81-82, it was (and is) preferable in most instances to have an icon be visually shown as moving or being duplicated during "drag-and-drop" as the user moves

the stylus/finger in order to provide feedback to the user. However, if a GUI, for any reason, does not provide interim feedback to the user by visually showing the icon actually moving with the stylus/finger, that does not change the nature of the operation as a drag-and-drop operation.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 59, 61. Nor does the fact that Hirayama-307's icon 41 is enlarged into window 43 in the process of the drag-and-drop operation change the nature of Hirayama-307's operation from drag-and-drop to something else. *Id.*, ¶ 60.

And Hirayama-307's "drag-and-drop" operation is functionally identical to the "drag-and-drop" operation disclosed in Hoshino that was distinguished from the "gliding ... away" limitation during prosecution. As. Dr. Rosenberg explains:

> Hirayama-307's drag-and-drop operation is also functionally identical to the drag-and-drop operation disclosed by the prosecution Hoshino reference to activate an icon, which the Applicant during prosecution explained "does not teach gliding a finger away from an icon," but "[i]nstead, Hoshino teaches a drag-and-drop operation for moving an icon." Ex. 1003 [Prosecution History] 171. Specifically, as shown in the schematic annotation of Hoshino Fig. 19 below, item 23 in Hoshino is music content which the user may wish to, for example, play or purchase. Ex. 2010 [Hoshino] ¶ [0110]. The user activates the file for playback or purchase by dragging it into the corresponding box that states "purchase" or "listen for trial." Ex. 2010 [Hoshino] ¶¶ [0111]-[0114].
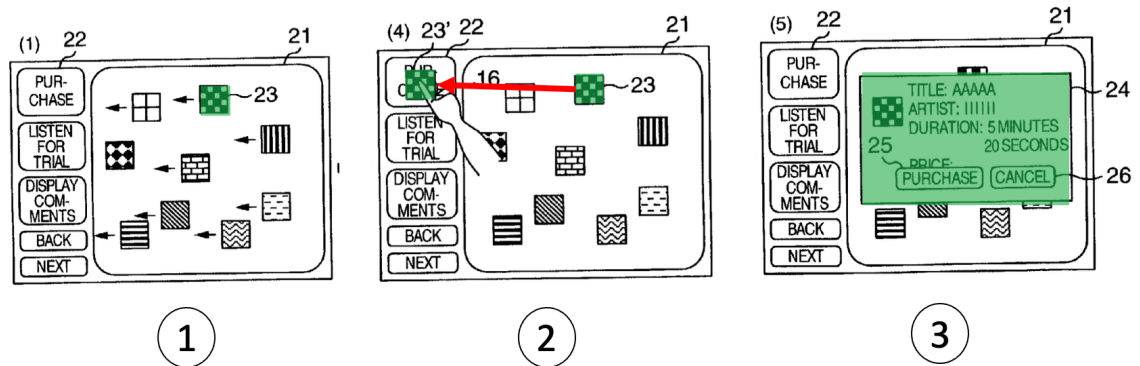
As is apparent from the above, Hoshino's user activates a music icon by dragging the icon to a designated area, resulting in a larger window opening.

This is basically the same as Hirayama-307's operation. Hirayama-307's user similarly opens an icon 41 window by dragging the icon into the non-hatched area at the location where the user wishes the enlarged window to be placed.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 62-64.

As Dr. Rosenberg further explains, even though two gestures may include overlapping movements, even small distinctions between various gestures are significant in the context of human computer interaction:

The distinction between "gliding … away" and a drag-and-drop gesture is material, even though they may have overlapping movements. In the field of human computer interaction, even small differences between gestures can have substantial consequences. Notably, and as discussed in greater detail in paragraphs 38-49 Neonode's N1 and N2 phones were widely praised for their intuitive gliding feature. *See also, e.g.,* Exs. 2012, 2013 (praising the swiping feature, calling it "simple and

brilliant").   It is most unlikely that Neonode's phones would have received such praise if they replaced their seamless gliding functionality with a cumbersome drag-and-drop operation as shown in Hirayama-307.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 65. In fact, Hirayama-307 is the very type of "dreaded" gestures of pen-based devices that Pen Computing Magazine assured its readers is different from the Neonode swipes! Ex. 2012 [Pen-Computing-Magazine-N1-Phone-Review] 2.

As Dr. Rosenberg further explains, Petitioner's own Ren reference further demonstrates how even small differences in movements can be material. For example, even though Ren's "slide touch" and "slide off" options have very similar movements, Ren finds that, both objectively and subjectively, "slide touch" is superior. Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 66.

> Similarly, even though both the claimed "gliding … away" gesture and a drag-and-drop operation may include movement of the stylus/finger on the screen, which may even happen to start and end at similar positions on the screen, they are fundamentally different with pronounced differences for the user. In a drag-and-drop operation, the user generally perceives some form of an object/function as behaving as if it is being dragged by the movement of the stylus/pen. Sometimes an operating system provides visual feedback by actually showing the object moving on the screen together with the stylus/pen.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 67.

Therefore, for the reasons explained above, Hirayama-307 discloses a "conventional" drag-and-drop gesture which is distinct from the claimed "gliding … away" gesture.

> 3. Petitioner's Expert Testimony That Hirayama-307's Drag-And-Drop Gesture Discloses The Claimed "Gliding … Away" Is Conclusory And Entitled To Little Or No Weight.

Petitioner relies solely on Dr. Bederson's declaration to allege that Hirayama-307 discloses the claimed "gliding … away" gesture. Pet., 58-59, *citing* Ex. 1002 [Bederson-Decl.] ¶ 156. Dr. Bederson's testimony is entitled to little or no weight as he admitted that he has not opined on whether a drag-and-drop operation discloses the claimed "gliding … away" gesture and he had not analyzed the portions of the prosecution history that expressly state a drag-and-drop operation is distinct from the claimed gesture. The Petition, thus, fails to meet its burden of proof as a matter of law.

Dr. Bederson testified that he does not "recall" having even reviewed the portion of the prosecution history wherein the Applicant expressly refers to drag-and-drop operations as "conventional" and distinct from the claimed "gliding … away" and fail to disclose it:

Q. Okay. Did you review Page [171]⁵ and the relevant pages around Page 171 of Exhibit 1003?

A. I don't recall.

Ex. 2005 [Bederson-Depo.] 147:3-5; *compare* Ex. 1003 [Prosecution-History] 171 (distinguishing the claimed "gliding ... away" from Hoshino's "conventional" "drag-and-drop" operation).

Importantly, Dr. Bederson expressly and repeatedly admitted that he has ***no opinion*** on whether a drag-and-drop operation discloses the "gliding … away" limitation:

Q. Is it your opinion that a drag and drop operation discloses limitations 1B and 1C, which explain an object touching the touch sensitive area of the screen and gliding along the touch sensitive area away from the representation of a function?

A. ***I don't think I formed any specific opinions about drag and drop operation. So I don't know that I have an opinion about that***.

Ex. 2005 [Bederson-Depo.] 142:15-23; *see also id.,* 142:25-143:9 ("I don't recall having any specific opinions about drag and drop operation"); 142:4-13 ("I don't

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⁵ The questioner asked about page 171, as is clear from the remainder of the question and the surrounding context (*see, e.g.*, 139:24-140:14). The transcript in one place errantly refers to page 117, however.

know that it does or does not teach gliding away"); 146:20-23; *see also id*., 150:8-
14 ("Q. What is the distinguishing feature that would distinguish a drag and drop
gesture from a swiping gesture? A. It's not something that I analyzed in my report.
So I don't have an opinion sitting here today."); 145:2-6.

Thus, Petitioner's expert testimony, which did not analyze the relevant
portions of the prosecution history and did not perform any of the necessary
underlying analysis to arrive at the conclusion of obviousness is entitled to little
weight. 37 C.F.R. § 42.65; *Google Inc. v. Koninklijke Philips N.V.*, IPR2017-
00409, Paper 10, 14-15 (June 5, 2017) ("Petitioner's conclusory argument and
equally conclusory expert declaration testimony are insufficient to show that a
disclosure of substantially continuous scrolling necessarily constitutes a disclosure
of non-continuous scrolling."); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed.
Cir. 2005) ("[A] court should discount any expert testimony that is clearly at odds
with the claim construction mandated by ... the prosecution history") (internal
quotations and citations omitted).

For the foregoing reasons, the Petition fails to demonstrate that Hirayama-
307 discloses the claimed "gliding … away" limitation.

B.   **Petitioners' Ground Fails To Disclose Or Render Obvious "Wherein The Representation Of The Function Is Not Relocated Or Duplicated."**

The claims require that "the representation of the function is not relocated or duplicated during the gliding" of the object (*e.g.*, finger). Petitioner presents two alternative theories for why this limitation is obvious. First, the Petition relies on single-reference obviousness[6] over Hirayama-307, arguing that "[i]t would have been obvious" to "implement the user interface" of Hirayama-307 such that the mapped representation of a function is not duplicated or relocated during the drag-and-drop operation. Pet., 60. Hirayama-307, however, makes perfectly clear that the representation of a function *is* in fact moved during the drag-and-drop operation. *See* Section II.B.1, *infra*. The Petition provides no reason why a POSITA would have been motivated to modify Hirayama-307, especially in view of its own disclosures to the contrary. *See* Section II.B.2, *infra*.

Second, the Petition alternatively relies on importing Ren's "slide off" selection technique into Hirayama-307 instead of Hirayama-307's own drag-and-

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[6] The Institution Decision provisionally found that Hirayama-307 alone "discloses" this limitation, but the Petition's first alternative ground was only based on a single-reference obviousness. Paper 26, 7; *see also* Ex. 2005 [Bederson-Depo.] 99:19-100:7.

drop operation. Pet., 62, 30. The Board previously found that the Petition fails to

show why a POSITA would have made the proposed substitution. Paper 24, 20.

For these reasons and more, Petitioner fails to prove that a POSITA would be

motivated to modify Hirayama-307 in view of Ren in a manner that would satisfy

this limitation. *See* Section II.B.3, *infra*.

> 1.   Petitioner's Single-Reference Obviousness Argument Fails.

>> a.   *Petitioner's Single-Reference Obviousness Argument Is Based On The False Premise That Hirayama-307 Does Not "Relocate[] Or Duplicate[]" The Representation Of Function.*

As noted, the Petition's first theory alleges that "[i]t would have been

obvious" to "implement the user interface" of Hirayama-307 such that "the

representation of the function is not relocated or duplicated" during the drag-and-

drop operation. Pet., 60; Ex. 2005 [Bederson-Depo.] 99:19-100:7. Significantly,

however, the Petition's single-reference obviousness analysis is based on the false

premise that Hirayama-307 "does not describe or show icon 41 ("representation")

is dragged or otherwise relocated or duplicated during the movement of pen 3."

Pet., 60. Going still further astray, Petitioner argues that Hirayama-307 "suggest[s]

the icon is not relocated or duplicated." *Id*., 62 ("A POSA would have understood

this as at least a suggestion the icon is not relocated or duplicated ...").

This is incorrect. Hirayama-307 is crystal clear that its "representation of

the function" is in fact "relocated or duplicated." Hirayama-307 discloses a user

interface whereby a user can drag an application icon and drop it on the screen at

the location where the user wishes the "enlarged window" of the application to be

located. Ex. 1006 [Hirayama-307] 2:1-13; 5:30-66; Figs. 3A, 3B. As shown in the

annotated figure blow, the Petition (at 53, 60) maps Hirayama-307's icon 41

(green) for a telephone application to the claimed "representation of a function,"

and maps (Pet., 58-60) the user's drag-and-drop operation (red arrow) to enlarge

icon 41 into the window 43, and position the window 43 on the screen, to the

claimed "gliding … away" limitation:
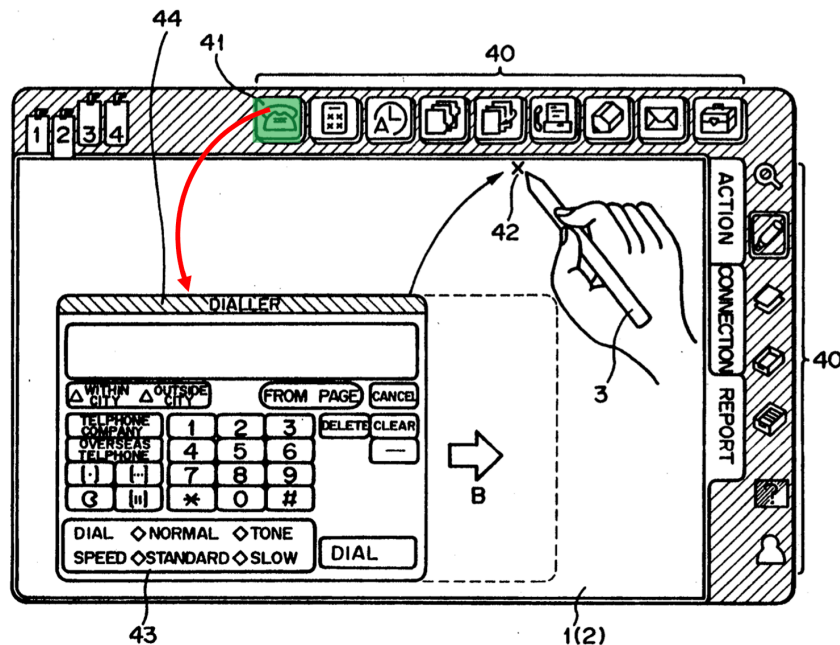
The Petition then argues that "[a] POSA would have recognized

Hirayama307 does not describe or show icon 41 ('representation') is dragged or

otherwise relocated or duplicated during the movement of pen 3." Pet., 60.

Petitioner is wrong. As Dr. Rosenberg explains below, Hirayama-307 *expressly*

states that "***the icon*** [*e.g.*, icon 41] display coordinate position ***is moved in***

accordance with the movement of the position coordinate of the point of ***the pen***"

before icon 41 is enlarged into the window 43. Ex. 1006 [Hirayama-307] 2:5-13.

> I will now explain the operation of Hirayama-307, and why the selected
> icon (*e.g.*, icon 41) is "relocated or duplicated" at least for a portion of
> the drag-and-drop operation. For the convenience of the reader, my
> discussion is with reference to the schematics below, which I have
> prepared based on Hirayama-307's written description of its system:[7]

---

[7] The movement of the stylus in the figures is initially shown to the left,

before the stylus is brought down into the non-hatched area, in order to more easily

show the duplication/relocation of icon 41 while the pen is in the hatched area.
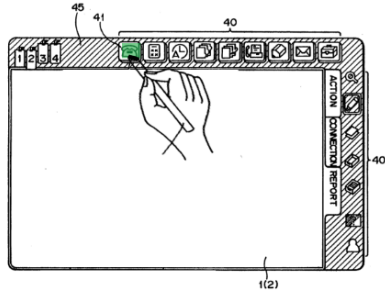
The stylus touches the icon the user wishes to "enlarge." Ex. 1003 [Hirayama-307] 2:1-4; 5:30-32.
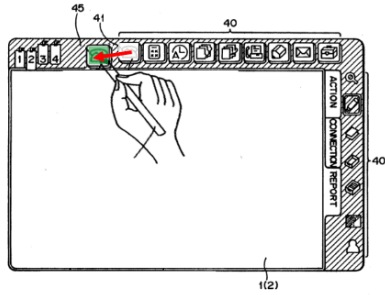
While the stylus moves within hatched area 45, icon 41 moves with it. Ex. 1003 [Hirayama-307] 2:5-8; 5:39-53.
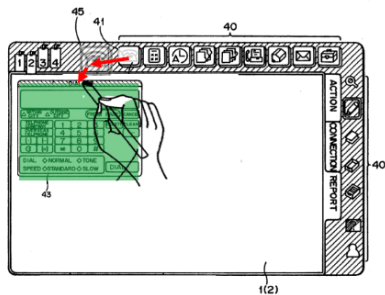
When the stylus moves outside of hatched area 45, icon 41 is "enlarged as a window 43." Ex. 1003 [Hirayama-307] 2:8-13; 5:59-66.
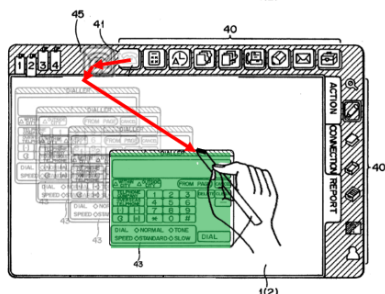
Enlarged window 43 is placed at the position where the stylus is lifted from the screen. Ex. 1003 [Hirayama-307] 2:8-13; 5:59-66.

In order to utilize a particular application, the user has to drag the icon for that application from its location in the hatched area and drop it inside the non-hatched area at a location where the user wishes the enlarged window of the application to be located. For example, when the user wishes to use Hirayama-307's dialing application (represented by icon 41), the user moves the stylus to the application icon 41. Ex. 1006 [Hirayama-307] 2:1-4; 5:30-32. The user then must drag icon 41

into the non-hatched area of the screen. *Id.*, 2:5-8; 5:39-53. As the icon 41 is dragged outside of the hatched area, "a circuit converts the icon into a window." *Id.*, 2:8-13; 5:59-66 ("it is enlarged as a window 43"). The enlarged window 43 is then placed (*i.e.*, dropped) at the location within the non-hatched area where the user lifts the stylus. *Id.*, 2:8-13; 5:59-66.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 71-72. As Dr. Rosenberg further explains, Hirayama-307 discloses that while icon 41 is being dragged and before it is "enlarged" into a window, its "display coordinate position" is "moved" together with the "coordinate of the point of the pen":

> Hirayama-307 expressly discloses that as icon-41 is being dragged, and prior to its conversion into window 43, it moves with the movement of the pen 3. Specifically, as highlighted portion of Hirayama-307, 2:1-13 shows, the pen first touches the "coordinate position in which a desired icon [e.g., icon 41] is displayed" (yellow), then as the pen moves, "the icon [41] display coordinate position" moves with the pen (green), and then icon 41 is "convert[ed]" "into a window" (e.g., window 43) in the non-hatched display area (blue).

portion. A circuit is provided for detecting whether or not coordinate data indicative of the position in which the electronic pen touches the display device exists at a coordinate position in which a desired icon is displayed. A circuit controls the icon display coordinate position such that the icon display coordinate position is moved in accordance with the movement of the position coordinate of the point of the pen. A circuit detects whether or not the position coordinate of the point of the pen is moved to a predetermined area and a circuit converts the icon into a window when it is detected that the point of the pen is apart from the display device within the predetermined area.

The pen touches the "desired icon" (e.g., icon 41)

"*The* icon display coordinate position" moves with the pen

"*The* icon" is "converted" into window (e.g., window 43) in the non-hatched display area

Ex. 1006 [Hirayama-307] 2:1-13

This relocation or duplication is schematically shown in the modified version of Hirayama's figure which depicts the green icon at the point of the red arrow is the "moving" location of the original icon 41 as it is being dragged:
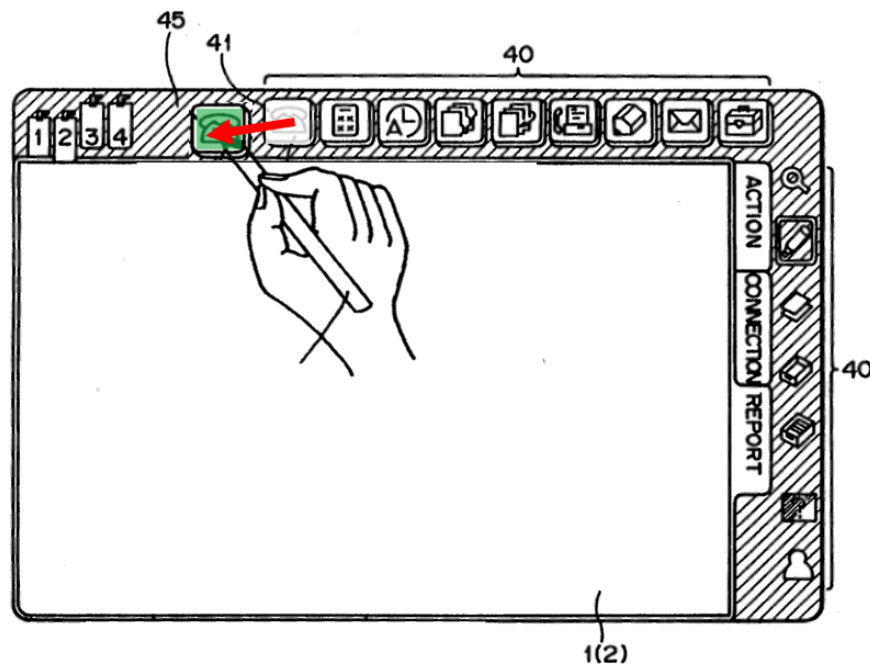
Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 73-74.

As Dr. Rosenberg explains, that Hirayama-307's icon is moved during its drag and drop operation is further confirmed by the balance of Hirayama-307's disclosure, including Hirayama-307's reverse operation:

Other disclosures in Hirayama-307 confirm the above. For example, Hirayama-307 also discusses a reverse operation, where an open window is dragged-and-dropped into its application icon position in order to close the window. *Id.*, 6:22-7:6; Fig. 4B. In discussing the reverse drag-and-drop operation for closing an open window, Hirayama-307 explains that the open window is dragged and dropped "to the predetermined *vacant* position," referring to the position of the application icon corresponding to the window. *Id.*, 7:3-6; Fig. 4B (step S10). This disclosure confirms that application icon 41 was "relocated" when it was opened by the drag-and-drop operation as its location is now "vacant." The location would not be "vacant" if the icon had not moved.

Furthermore, in the same reverse drag-and-drop to close an open window, Hirayama-307 similarly explains that "the window display coordinate position is moved in accordance with the movement of the position coordinate of the point of the pen." Ex. 1006 [Hirayama-307] 2:24-27. This is precisely the reverse of the procedure to create a window 43, where the application icon 41 moves with the movement of the pen prior to its conversion into a window, *id.*, 2:5-8, demonstrating that Hirayama-307 takes the same approach to both operations.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 75-76. As Dr. Rosenberg explains, It would also be common sense for the POSITA that Hirayama-307 would "relocate" icon 41 and leave its location vacant while its window 43 is open. *id.*, ¶¶ 77. Furthermore,

> As yet another supporting disclosure, Hirayama-307 routinely states that the application window 43 is created by "enlarging" the dragged application icon 41. *See, e.g., id.*, 5:39-40 ("icon is enlarged in the form of window"); 5:64-66 ("the processing display form of the icon 41 designated is enlarged as a window 43"); 7:14-15 ("the icon position to be enlarged"); 2:10-11 ("a circuit converts the icon into a window"). This disclosure further confirms that icon 41 is moved with the stylus/pen during the drag-and-drop process, and it is "enlarged" (or "converted") into a window when the proper trigger happens. If the icon 41 did not move with the movement of the pen to then be "enlarged" or "converted" into window 43, Hirayama-307 would have referred to the process as "creating" or "opening" a window.

> Furthermore, it is notable that there is no disclosure in the text of Hirayama-307 that *contradicts* its disclosures that the application icon is moved with the pen prior to being enlarged into the window. For example, Ex. 1006 [Hirayama-307] 5:16-67 explains the flow diagram of logical determinations of its drag-and-drop operation, but is silent on whether icon 41 is duplicated or moved during the dragging process within the hatched area.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 78-79.

Petitioner relies significantly upon Hirayama-307's Fig. 3A, but, as Dr. Rosenberg explains, 3A concerns the state of the device before the drag and drop operation begins:

> Petitioners' reliance on Hirayama-307's Fig. 3A and its related text for the proposition that icon 41 is not relocated or duplicated during the drag-and-drop operation is misplaced. Pet., 60-61. A POSITA would understand that Fig. 3A represents the state of the device **before** icon 41 is being dragged. In connection with Figs. 3A and 3B, Hirayama-307 explains that "[i]f the pen coordinate is considerably shifted from the reference moving amount, or if the pen coordinate is outside of the predetermined designated area (e.g., the hatched area in this embodiment)," then icon 41 is "enlarged as a window 43 as shown in Fig. 3B." Ex. 1006 [Hirayama-307] 5:59-66. In Fig. 3A, however, the tip of the pen is both outside of the hatched area, and has considerably shifted as it is well into the active screen area, **but** there is no enlarged window:
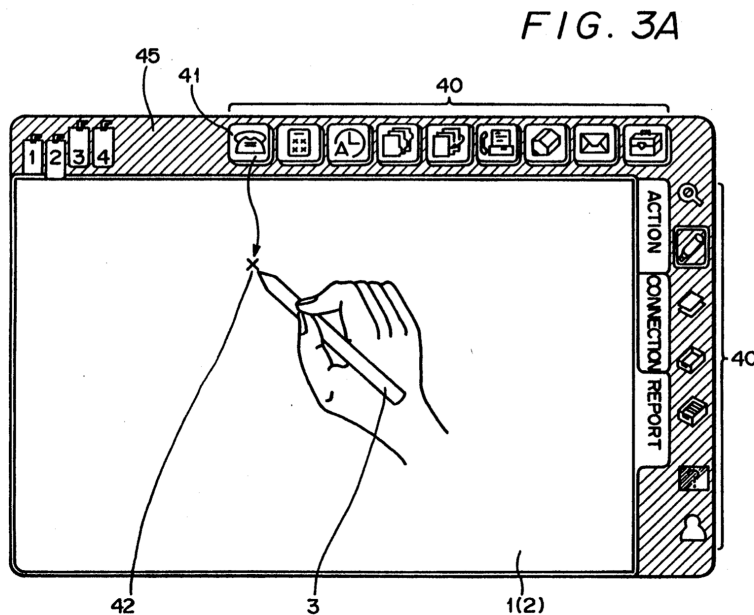
FIG. 3A

Id., Fig. 3A. Thus, a POSITA would understand that if Fig. 3A was intended to show the state of the screen during a drag-and-drop operation, then it should have also shown an enlarged window 43. Instead, Fig. 3A only shows "a cross-shaped position designating cursor 42," which is shown "as the point of the pen 3 approaches the panel surface of the display portion 1"—*i.e.*, before the pen has selected the icon 41 to initiate the process of drag-and-drop. *Id.*, 4:65-68.

Furthermore, the written description corresponding to Fig. 3A is clear that the figure is intended to show the state of the device at power-on, explaining that "***when the power switch 10 shown in Fig. 1 is depressed***, icon groups 40 which make various processing possible are displayed on the display portion 1 ***as shown in FIG. 3A***." Ex. 1006 [Hirayama-307] 4:58-61. Thus, even though Fig. 3A shows a pointed arrow from icon 41 to the location of the point of the pen, a POSITA would understand that the arrow is likely intended to show how the

device is going to be operated on power-on, and not a depiction of the

screen during a drag-and-drop operation.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 80-81.[8]

In connection with their arguments for claim 3, Petitioners further argue that

Hirayama-307 "present[s] a similar user interface" to another reference by "the

same inventor," named Hirayama-878, which "discloses, similar to …

Hirayama307, selecting an icon by a pen touching the icon and moving into an area

of the display …." Pet., 70-71. To the extent "a POSA would have looked to

Hirayama878 for teachings on how to implement the window 43 and related

functionality of Hirayama307," as Petitioner alleges (*see* Pet., 72), then

Hirayama878 also demonstrates that an activated icon is moved from its location,

---

[8] To the extent Petitioner seeks to belatedly rely on Hirayama-307's Fig. 3B

for the proposition that icon 43 is not relocated during the drag-and-drop operation,

that reliance is still misplaced. The claims require that the representation of the

function not be "relocated *or duplicated*." Thus, even if Hirayama-307 maintains

the original icon and moves a duplicate with the movement of the pen that would

still fail to disclose the claim because in that case, the icon is "duplicated." As

Hirayama-307 makes perfectly clear, the icon "is moved." Ex. 1006 [Hirayama-

307] 2:5-8,

and that its location is "vacant" when the icon is "convert[ed]" into a window.

This is demonstrated by a comparison Hirayama878 Figs. 5A and 5B, annotated

below:
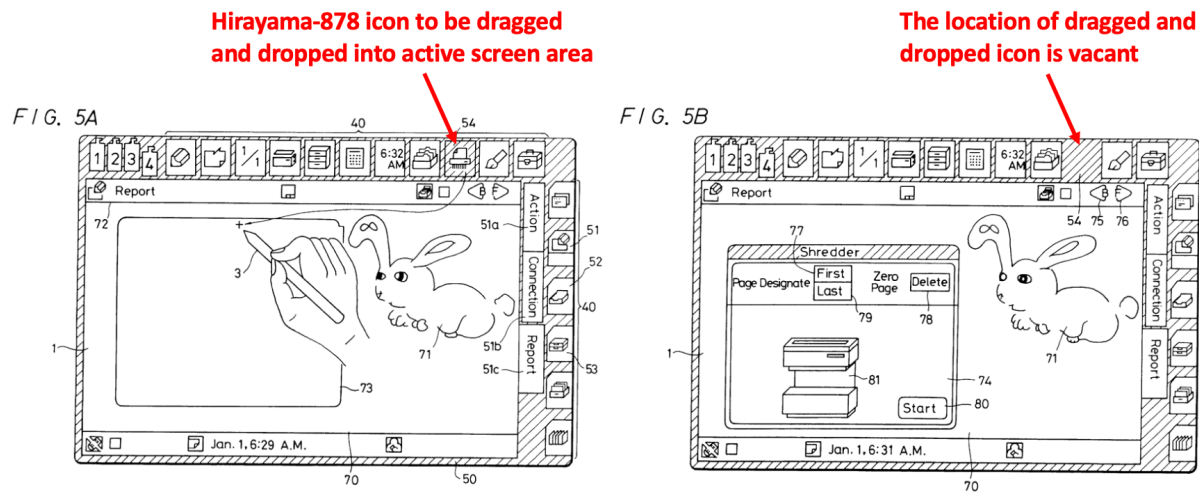
Ex. 1009 [Hirayama-878] Figs. 5A, 5B; *compare* Ex .1006 [Hirayama-307] 7:4-6;

Fig. 4B (step ST10).

Thus, Hirayama-307 discloses that icon 41 is "relocated or duplicated"

during the drag-and-drop operation.

> b.   *The Petition Provides No Reason Why A POSITA Would Modify Hirayama-307.*

As just explained, Petitioner's argument that the limitation is obvious over

Hirayama-307 is based upon the assumption that Hirayama-307 "at least

suggest[s]" that "the icon is not relocated or duplicated" during the drag-and-drop

operation. From this premise, Petitioner concludes that "it would have been

obvious, given Hirayama307's disclosure[,] to implement the user interface such

that the icon is not relocated or duplicated" during the drag-and-drop operation. Pet., 60-62. But Petitioner's premise is demonstrably incorrect. Hirayama-307 is perfectly clear that its icon *is* moved and, "garbage in, garbage out," Petitioner's conclusion does not follow.

Moreover, a POSITA would not have been motivated to implement a drag-and-drop operation (such as Hirayama-307's) without relocating or duplicating the icon being dragged during the drag process. As Dr. Rosenberg explains:

> In graphical user interfaces, it is important to provide visual feedback to the user during an operation. This helps, for example, inform the user that the operation is in fact being successfully performed. It also helps design the graphical user interface as close as possible to real life experiences outside of the virtual world, and give the user a real-life "feel." This is an important concept in GUI design. In the context of a dragging operation, this feedback mechanism was, and continues to be, generally provided by visually showing the icon being moved or duplicated across the screen during the drag operation. This would help the user receive feedback that, as the user drags an icon with the mouse/stylus/finger, the icon is in fact being dragged and the drag-and-drop operation is successfully in progress. This would also help the user get a real life "feel" for the drag-and-drop operation by visually seeing an icon being dragged.
>
> Further supporting the above, the visual presentation of a "dragging" icon was also common in both the Microsoft Windows and Macintosh MacOS environments. For example, the graphic below demonstrates a

file icon being dragged into a blank Microsoft Word active window in a MacOS Monterey operating system, so that the file can be opened. As can be seen, while the file icon is being dragged, and before it is dropped into the active MS Word window to be opened, the file icon is duplicated:
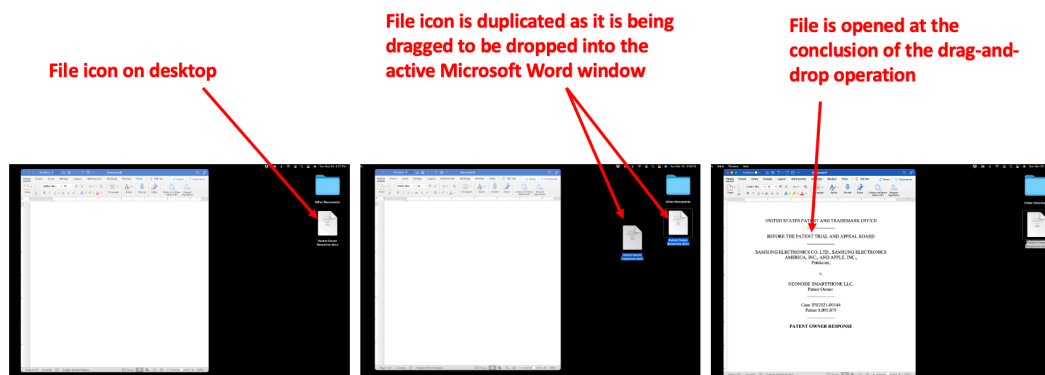
Thus, there simply is no reason for a POSITA to implement Hirayama-307's drag-and-drop process, but avoid the industry-standard method of providing user feedback by "relocating or duplicating" the icon during the drag-and-drop operation.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 83-85.

In arguing that Hirayama-307 renders obvious the limitation "the representation of the function is not relocated or duplicated," Petitioner also relies on Hirayama-307's disclosure that as the pen/stylus gets close to the touchscreen, a cross-shaped cursor 42 appears on the screen to designate the precise location of the pen. Pet., 60-61, *citing* Ex. 1006 [Hirayama-307] 4:66-5:3; 1:56-59; 7:10-24. Petitioner appears to rely on this disclosure for the proposition that Hirayama-307

relied on a cursor as feedback to show the user the current state of a drag-and-drop

operation, and therefore did not need to "relocate or duplicate" the icon 41 during

the operation. As Dr. Rosenberg explains, this reliance is misplaced:

> In relying on Hirayama-307's cursor, Dr. Bederson appears to suggest
> that the cursor itself is the only feedback provided to the user during the
> drag-and-drop operation in Hirayama-307, and, therefore, there is no
> need to relocate or duplicate the icon 41 as it is being dragged. Ex.
> 1002 [Bederson-Decl.] ¶¶ 158-159. That is not correct. Hirayama-
> 307's text only discloses that the cursor appears on the screen "as the
> point of the pen 3 approaches the panel surface of the display," Ex. 1006
> [Hirayama-307] 4:65-68—*i.e.*, **before** the pen has started the drag-and-
> drop operation. In other words, the cursor is used to assist the user in
> moving the pen to the location of the icon, just as a mouse cursor on a
> desktop display moves on the screen to assist the user in locating the
> mouse pointer. Hirayama-307 does not state that the cross-shaped
> pointer continues to appear on the screen during the drag-and-drop
> operation instead of the image of the icon 41 actually being dragged.
> Rather, as noted above, Hirayama-307 states that icon 41 itself moves
> with the pen during the dragging process. *Id.*, 2:5-8.
>
> Furthermore, a POSITA would understand that Hirayama-307's cursor
> is insufficient to provide feedback to the user during the drag-and-drop
> operation, and that there is no motivation to eliminate the typical
> "relocation or duplication" of the icon during a drag-and-drop operation
> in reliance on the existence of the cursor. This is because, even if Dr.
> Bederson was correct that the cursor appears on the screen during the

drag-and-drop operation, the cross-shaped pointer *also* appears on the screen prior to the pen/stylus initiating the drag-and-drop operation. Ex. 1006 [Hirayama-307] 4:65-68. In other words, the appearance of the cross-shaped cursor does not denote to the user anything about the drag-and-drop operation, but simply that the pen is communicating with the screen, and the location of the tip of the pen. Thus, if all the user sees on the screen is a pen with a cross-shaped cursor after the user has initiated a drag-and-drop operation, the user would not know if the drag-and-drop operation is being successfully performed as the user drags the pen. All the user can learn from the position of the cursor is that the pen itself is moving across the screen. This is shown schematically below:
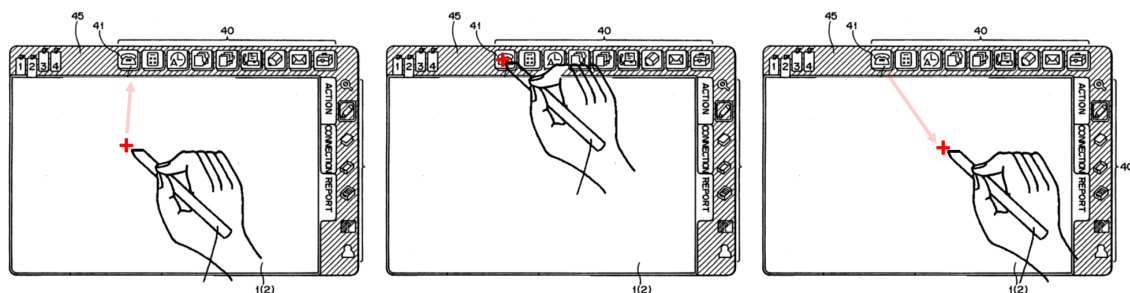
If the cursor is the feedback for Hirayama-307's drag-and-drop operation, the user in the right photo would not know if the initiated drag-and-drop operation is being successfully performed as the pen is dragged away from icon 41.

This is why, again, a cursor moving alone is typically insufficient to provide feedback for a drag-and-drop operation.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 86-88.

For the foregoing reasons, Hirayama-307 alone does not disclose or render obvious "wherein the representation of the function is not relocated or duplicated."

2.   A POSITA Would Not Have Been Motivated To Modify Hirayama-307 In View Of Ren So That The Representation Of The Function "Is Not Relocated Or Duplicated."

Petition also argues that "it would have been obvious to combine the teaching of Ren with Hirayama307" by "implement[ing] Ren's selection techniques" in Hirayama-307's device. Pet., 62. Petitioner proposes that a POSITA would have been motivated to utilize a specific variant of one of six categories of gestures disclosed by Ren instead of Hirayama-307's drag-and-drop operation. Pet., 30-31, 62. The Board, however, has already rejected the Petition's proposed combination:

> Petitioner's assertion that an ordinarily skilled artisan would have had reason to combine Hirayama307's and Ren's teachings because the references both are directed to solutions to the same problem establishes that the references are analogous art, but falls short of articulating reasoning with a rational underpinning to support the conclusion of obviousness. *See KSR*, 550 U.S. at 418. And Petitioner does not direct us to any "design need or market pressure to solve a problem," or any reason that an ordinarily skilled artisan would have selected a particular strategy from Ren to produce the claimed invention. *Id.*; *In re Cyclobenzaprine Hydrochloride Extended–Release Capsule Patent Litig.*, 676 F.3d at 1072. Rather, Petitioner simply concludes that it would have been obvious to try. Although Petitioner cites to Dr. Bederson's testimony for support, Dr. Bederson does not elaborate on Petitioner's argument, as his testimony mirrors the Petition's conclusion. Ex. 1002 ¶ 162.

Paper 24, 20.[9] As will be explained below, the Board's holding is correct.

The specific gesture relied upon by Petitioner from Ren is the "a → c → b → a" variant of a category of gestures called "slide off," which itself is one of six categories of gestures disclosed by Ren:

> Ren discloses six categories of selection strategies: Direct On, Slide Touch, Direct Off, Slide Off, Space On, and Space Touch. Ex. 1004 [Ren] 389-391. Under each of these general selection strategies, Ren discloses one or more variants. *Id*. The Petition relies on a specific variant of the "Slide Off" category, referred to as "a → c → b → a." Ex. 1002 [Bederson-Decl.] ¶¶ 160-161. Ren's six selection categories (blue), and the specific gesture relied upon by Petitioner (red), are shown below in the annotated Fig. 3 from Ren:

---

[9] While the Board subsequently granted Petitioner's request for rehearing and instituted trial, it did so only by provisionally finding that Hirayama-307 alone discloses the claim, and did not revisit its earlier holding about a lack of motivation to combine Hirayama-307 and Ren. Paper 26, 7.
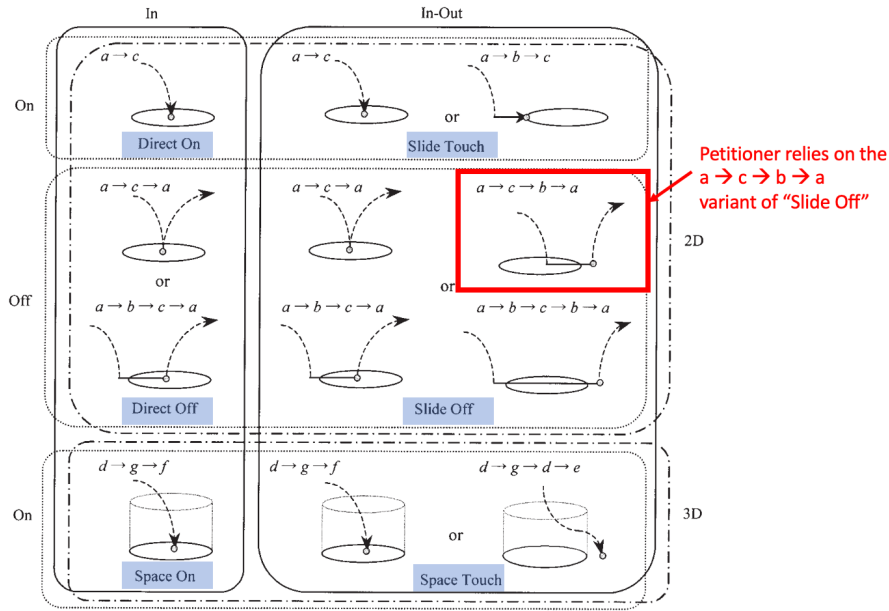
Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 90.

The Petition's purported motivation to substitute Hirayama-307's drag-and-drop operation with a variant of Ren's slide-off strategy is the following:

> For example, Ren and Hirayama307 both are directed to solutions to the same problem, namely target selection techniques in pen-based tablet systems. As another example, a POSA would have recognized Ren as disclosing a small number of selection techniques that would have been obvious to try and implement with pen-based GUI interaction systems.

Pet., 62. Both of Petition's purported motivations fail.

First, as the Board has already found, that Hirayama-307 and Ren are allegedly directed to solutions to the same problem may "establish[] that the references are analogous art, but falls short of articulating reasoning with a rational

underpinning to support the conclusion of obviousness." Paper 24, 20; *accord*

Comcast Cable Communs., LLC v. Promptu Sys. Corp., 838 F. App'x 551, 557

(Fed. Cir. 2021) (Petitioner "had not proven a motivation to combine because it

merely (1) alleged the references came from the same field of study and address

the same problem; and (2) recited boilerplate legal conclusions untethered to any

claim language."); *see also Microsoft Corp. v. Enfish, LLC*, 662 Fed. App'x 981,

990 (Fed. Cir. 2016); *William Wesley Carnes, Sr., Inc. v. Seabord Int'l Inc.*,

IPR2019-00133, Paper 10, 17 (May 8, 2019) (merely alleging similarities between

references does not provide rationale to combine).

Hirayama-307 is already a complete system that has achieved the problem it

set out to solve without any apparent remaining shortcoming that Ren would

remedy. As Dr. Rosenberg explains:

> There is no apparent deficiency in Hirayama-307 that a combination
> with Ren would remedy and Petition cites none. In fact, as explained
> below, the Petition's proposed combination only deteriorates
> Hirayama-307. Specifically, Petitioner proposes that a POSITA would
> have combined Hirayama-307 with Ren so that Hirayama-307's drag-
> and-drop would not "relocate or duplicate" icon-41 during the dragging
> process. Pet., 62. However, as explained, the user feedback of
> relocating or duplicating an icon during the drag of a drag-and-drop
> operation was, and continues to be, significant as also implemented by
> main-stream systems such as MS Windows and MacOS and
> eliminating user feedback would worsen the user's experience.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 93; *see also id.*, ¶ 92.

In fact, Petitioner does not even allege that there is any deficiency in

Hirayama-307, or that the combination of Hirayama-307 with Ren would cause

any improvement in Hirayama-307. Pet., 62. When two references independently

operate effectively to accomplish similar functions, even if one were to assume that

Hirayama-307 and Ren seek to accomplish similar functions, a POSITA would not

have any motivation to combine them. *Kinetic Concepts, Inc. v. Smith & Nephew,*

Inc., 688 F.3d 1342, 1369 (Fed. Cir. 2012); *Hulu LLC v. Sound View Innovations*,

IPR2018-00582, Paper 34, 20-21 (Aug. 5, 2019) (informative) (rejecting

combination where petitioner had not "adequately supported" why it would have

been a "good idea").

Petitioner next asserts an obvious-to-try rationale, arguing that Ren discloses

"a small number of selection techniques" and that a POSITA would have been

motivated to specifically try the less favored "slide off" selection technique. Pet.,

62. As the Board found, the Petition's conclusory assertions are insufficient to

meet Petitioner's burden for an obvious-to-try rationale, and Petitioner's expert,

"Dr. Bederson does not elaborate on Petitioner's argument, as his testimony

mirrors the Petition's conclusion." Paper 24, 20, *citing In re Cyclobenzaprine*

Hydrochloride Extended-Release Capsule Patent Litig., 676 F.3d 1063, 1072 (Fed.

Cir. 2012) ("Evidence of obviousness, especially when that evidence is proffered

in support of an 'obvious-to-try' theory, is insufficient unless it indicates that the possible options skilled artisans would have encountered were 'finite,' 'small,' or 'easily traversed,' and that skilled artisans would have had a reason to select the route that produced the claimed invention."); *InfoBionic, Inc. v. Braemer Mfg., LLC*, IPR2015-01704, Paper 11, 6 (Feb. 16, 2016) ("We do not find the testimony of Petitioner's expert to be persuasive or helpful as it repeats the Petitioner's arguments and offers little or no elaboration as to how one of ordinary skill in the art would understand the term "'subset.""). As explained below, the Board is correct that the Petition is facially insufficient to meet Petitioner's burden.

First, if Petitioner is suggesting that the six categories of selection techniques considered in Ren suggests that there are only six or a similarly small number of such gestures, that is incorrect. As Ren explains, "[t]heoretically, an infinite range of selection strategies exists." Ex. 1004 [Ren] 389. In fact, Dr. Bederson reluctantly identified two additional techniques during his deposition. Ex. 2005 [Bederson-Depo.] 50:19-51:8 ("… there may be others. … in the last couple of hours, we've identified two others …."). Thus, the assumption that the universe of selection gestures was limited to merely six or so gestures such that a POSITA would simply try all selection gestures is incorrect. Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 94.

But even in the universe of the techniques considered by Ren, the notion that a POSITA would have a reason to specifically select the "a → c → b → a" variant of the "slide-off" strategy is refuted by both Ren and by Dr. Bederson's admissions. First, Ren itself expressly states that its "slide *touch*" selection category, not the "slide *off*" category relied upon by Petitioner, is the "best" strategy, thus directing a POSITA away from Petitioner's combination:

> Ren performed two sets of experiments "to determine the best individual strategy and the best strategy group." Ex. 1004 [Ren] 392-93. At the conclusion of the two experiments, Ren unambiguously determined that the "Slide Touch" strategy—not the "Slide Off" strategy relied upon by Petitioner—is the "single best strategy":
>
>> [4.4.2 The Best Individual Strategy and Best Strategy Group. ***The Slide Touch strategy is the best of the individual strategies. … [W]e concluded that the Slide Touch strategy is the single best strategy.***]
>
> Ex. 1004 [Ren] 412.
>
>> [These results, when combined with Experiment Two data, showed that ***the best strategy was the Slide Touch strategy*** when the strategies were evaluated individually.]
>
> *Id.* Ren's overall conclusions are also supported by the underlying results from its experiments. For example, as shown in the reproduction of Ren's Figs. 5 and 11, with respect to "Mean Selection Time,"

Petitioner's relied upon "Slide Off" strategy (red) came in third in the first (left) experiment and fifth in the second (right) experiment:
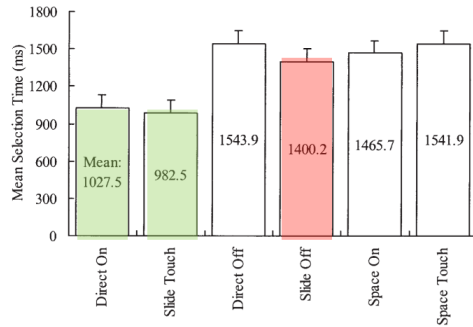

Fig. 5.   Mean selection times (with standard error bars) for each individual strategy in Experiment One.
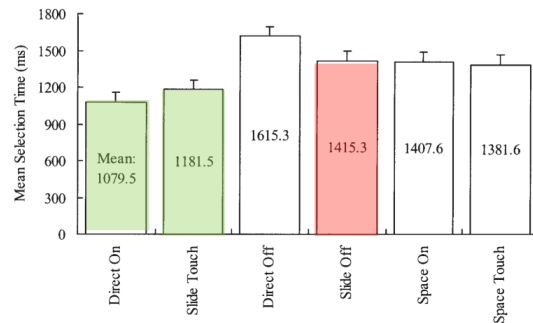
Fig. 11.   Mean selection times for each strategy in Experiment Two.

Similarly, as shown in the reproduction of Ren's Figs. 6 and 12, with respect to "Mean Error Rate," Petitioner's relied upon "Slide Off" strategy (red) came in third in both the first (left) and second (right) experiments:
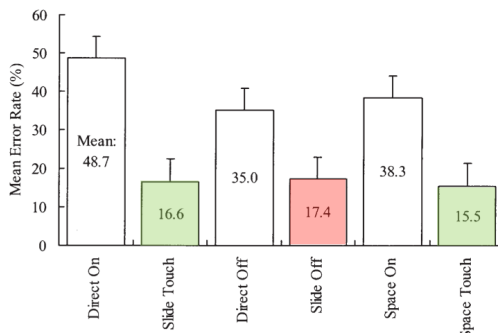
Fig. 6.   Mean error rates for each individual strategy in Experiment One.
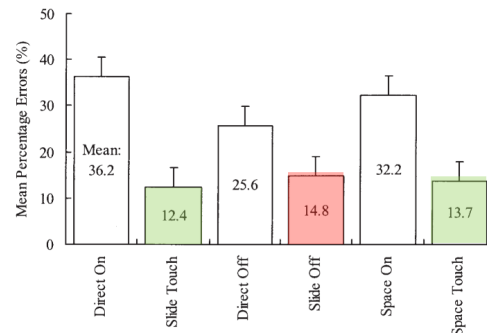
Fig. 12.   Mean error rates for each strategy in Experiment Two.

Finally, in addition to Ren finding objective superiority of the "Slide Touch" strategy to the exclusion of Petitioner's relied upon "Slide Off," Ren also found similar subjective preference by the users.   In experiment 1, the users had a clear preference for "Slide Touch" when object sizes were relatively small.   *Id.*, 401-402; Fig. 9.   When the

object sizes were relatively larger, "Slide Touch" and "Slide Off" were statistically tied. *Id*. "Slide Touch" was the overall preferred method under the first experiment. *Id*., 402-403 ("… the Slide Touch strategy was the most preferred …."). Similarly in the second experiment, "the Slide Touch strategy was the most preferred." *Id*., 409.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶¶ 96-99.

Notably, as Dr. Rosenberg explains, another one of Petitioner's references, Allard, further praises and utilizes the "slide touch" strategy, not Petitioner's relied on "slide off," explaining that "slide touch" is preferred because "a user can easily recover from touching an unintended button by leaving a finger on the screen and sliding to another button or a non-button area." Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 100 (discussing Ex. 1010 [Allard] 5:39-54).

> Allard also uses the strategy referred by Ren as "slide touch." Specifically, in Allard, the button that is last touched by the user is the button that is selected when the user lifts the stylus off the screen, whether the stylus originally landed outside of the button on the screen or on the button itself. Ex. 1010 [Allard] 5:39-44. In fact, Allard explains that using the slide-touch strategy is preferred because "a user can easily recover from touching an unintended button by leaving a finger on the screen and sliding to another button or a non-button area." *Id*., 5:45-54.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 100; Ex. 1010 [Allard] 5:39-54.

Ren's express teaching away from the slide-off strategy is also supported by the deposition admission of Petitioner's expert, as well as his prior publications. For example, Petitioner's expert opined at deposition that if a "mobile interface could be designed with tap or simpler interactions," then that is what the POSITA would have chosen:

> [G]enerally, I think the goal was to design interfaces, so that they would be fast and accurate. And ***tapping is easier to perform than dragging as a physical, mechanical element***. And so ***if*** it could be designed to be performed -- ***the mobile interface could be designed to be used with tap or simpler interactions, then that would have been something that would have been common to start with***.

Ex. 2005 [Bederson-Depo.] 56:2-10. Similarly, in a paper published in 2005—years after the invention—Petitioner's expert stated that "tapping" was the "most common" gesture in "handheld applications," and that "stylus drag commands" were "rarely used":

> Neither the cursor nor gestures interfere with the most common stylus interactions of tap and tap+hold. Although gestures do overlap stylus drag commands, dragging is rarely used in handheld applications and could be distinguished from gestures by explicitly setting a gesture input mode.

Ex. 2006 [Bederson-Paper] 203; *see also* Ex. 2005 [Bederson-Depo.] 47:5-48:16 (authenticating).

Thus, Dr. Bederson's deposition testimony, as well as his earlier publication, undermine Petitioner's argument and Dr. Bederson's own litigation opinion that a POSITA would have specifically chosen Ren's slide-off strategy to the exclusion of other strategies. When asked about the inconsistency between his current litigation opinion and his earlier publications, he stated:

> Counsel, I don't know exactly what I was thinking in this paper that I wrote almost 18 years ago.

Ex. 2005 [Bederson-Depo.] 52:1-7.

For all of the foregoing reasons, Petitioner fails to show that a POSITA would have substituted Hirayama-307's drag-and-drop operation with Ren's "a → c → b → a" variant of the "slide-off" strategy.

IV.   CLAIM 6 IS NOT SHOWN TO BE UNPATENTABLE.

Claim 6 depends from claim 1, and further requires that "the function, when activated, causes the user interface to display a list with a library of available applications *and* files on the mobile handheld computer unit." Ex. 1001 ['879] cl. 1. The Petition relies on Allard for the disclosure of the additional limitation of claim 6, arguing that:

> It would have been obvious to implement the tools icon functionality that displays a list with a library of available applications and files on the mobile handheld computer unit as disclosed in Allard, in the interface disclosed by Hirayama307 so as to provide a user information
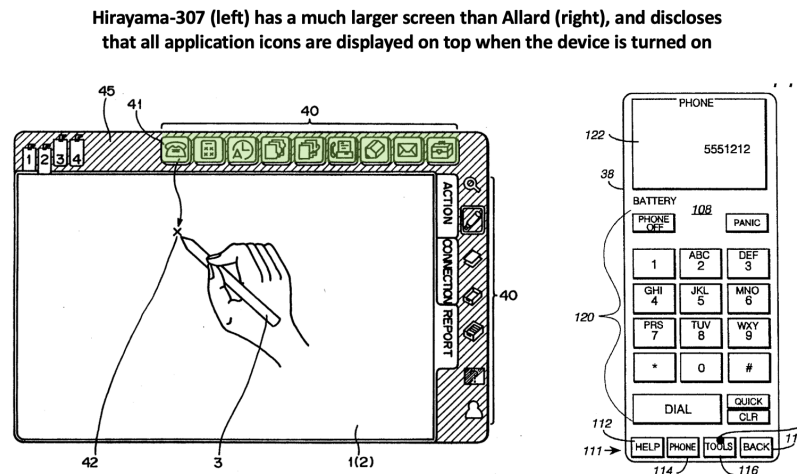
about the tools and applications available on the device, as taught by
Allard, and also suggested, for example, by Hirayama307.

Pet., 73. As explained below, the Petition fails to meet its burden.

First, claim 6 requires that the function causes display of a library of
available *both* "applications *and* files." Ex. 1001 ['879] cl. 6. The Petition's
ground assumes that Allard's tool function discloses a list of both applications and
files, and then relies on that assumption for the disclosure of this limitation. Pet.,
73 ("displays a list with a library of available applications and files on the mobile
handheld computer unit as disclosed in Allard"). However, Allard does not
disclose that its tool button provides a list of available *files*. Rather, Allard's tool
button only provides a list of *applications*. Ex. 1010 [Allard] 6:8-17. Thus, even
if the Petition's combination is made by importing Allard's tool button into
Hirayama-307, the combined system fails to disclose claim 6. The Petition does
not even acknowledge, let alone provide a motivation to remedy, this deficiency.

Second, the Petition does not provide any reason (much less a compelling
reason) why a POSITA would be motivated to modify Hirayama-307's system to
add a list of applications to be beneficial. Specifically, Allard utilizes a "Tool"
button that displays a list of applications because Allard relates to a small phone
with a very small screen which cannot provide icons for the available applications.
Ex. 1010 [Allard] 1:58-59; Fig. 4. In contrast, Hirayama-307 is a much larger

device which already provides, on the home screen, icons for all the available

applications. Ex. 1006 [Hirayama-307] 4:57-61 ("In the above-described data

processing apparatus of this embodiment, when the power switch 10 shown in FIG.

1 is depressed, icon groups 40 which make various processing possible are

displayed on the display portion 1 as shown in FIG. 3A."). The difference between

the two systems is shown by a comparison of Hirayama-307's Fig. 3A (left) which

has the available applications on the home page (green), and Allard's Fig. 4 (right),

which has no space on the home page for a list of available applications and thus

uses the Tools button:

Hirayama-307 (left) has a much larger screen than Allard (right), and discloses that all application icons are displayed on top when the device is turned on

Nor is it clear why adding such a list would provide any benefit to

Hirayama-307's system. In fact, as explained above, *see* Section III.A, Hirayama-

307 activates an icon by dragging it into the non-hatched area, and then closes an

open window by dragging it back to the vacant position on the hatched bar

corresponding to the window. *See also* Ex. 1006 [Hirayama-307] 6:22-7:6; Fig.

4B. It is not clear how Hirayama-307's operations would work if applications were opened and closed not from their location on the hatched bar, but from a list of all applications that is opened by a menu. For example, how would the window be closed if its corresponding icon location is not on the hatched bar, but is in some list to be opened by a menu?

It was Petitioner's burden to prove a motivation to combine. *Intelligent Bio-Sys., Inc. v. Illumina Cambridge, Ltd.*, 821 F.3d 1359, 1367-68 (Fed. Cir. 2016). Because Petitioner's motivation is not supported by any evidence, it fails as a matter of law. *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) ("To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.").

V.   CLAIM 15 IS NOT SHOWN TO BE UNPATENTABLE.

Claim 15 depends from claim 1, and requires that the "computer program code" of claim 1 be "adapted to function as a shell upon an operating system." Ex. 1001 ['879] cl. 15. Petitioner relies on Hirayama-307 for the disclosure or obviousness of this limitation, Pet., 67, but it fails to meet its burden.

IEEE Dictionary defines a "shell":

> A software interface between the user and the operating system in
> which the shell interprets commands and communicates them to the
> operating system of the computer.

Ex. 2038 [IEEE Dictionary] 1039. Thus, claim 15 requires that the computer

program code of claim that provides a user interface with "gliding … away"

activation capabilities not be designed as a part of the operating system, but instead

be provided as an add-on software to the operating system, *i.e.*, a "shell."

The Petition first argues that Hirayama-307's user interface that includes its

drag-and-drop gestures satisfies this limitation:

> A POSA would have recognized the user interface with icons for
> opening windows for, for example, the dialer function, is implemented
> in computer program code adapted to function as a shell upon the
> operating system of the portable computer.

Pet., 67. Thus, Petitioner alleges that Hirayama-307 necessarily and inherently

discloses that its gesture interface is implemented as a shell upon an operating

system. Yet, despite having the burden of proof, the Petition does not provide any

analysis of why a POSITA would simply "recognize[]" that Hirayama-307's user

interface ***necessarily*** operates as a shell. In fact, at deposition, Petitioner's expert

opined that "a POSITA would understand that there are multiple ways it can

choose to implement" Hirayama-307's drag-and-drop user interface to open a

window, and that Hirayama-307 does not "specifically disclose[]" any particular

way. Ex. 2005 [Bederson-Depo.] 112:25-114:25. Thus, Petitioner's inherency

argument fails on its own terms. *PAR Pharm. v. TWi Pharms., Inc.*, 773 F.3d

1186, 1195-96 (Fed. Cir. 2014) ("A party must [] meet a high standard in order to

rely on inherency … the limitation at issue necessarily must be present, or the

natural result of the combination ..."); *see also id*., ("Inherency, however, may not

be established by probabilities or possibilities. The mere fact that a certain thing

may result from a given set of circumstances is not sufficient.) (*quoting In re*

Oelrich, 666 F.2d 578, 586 (C.C.P.A. 1981)).

In the alternative, Petitioners asserts that it "would have been obvious over

Hirayama307 and POSA knowledge of well-known systems to implement similar

user interfaces as a shell upon an operating system." Pet., 67. But Petitioners

expert provides no motivation, reason or analysis as to why it would have been

obvious to implement a gesture-based user interface as a part of a shell, instead of

implementing it within the operating system where, for example, a shell would

consume more memory, and more CPU power, and would require additional

coding. A single conclusory sentence is insufficient to meet Petitioner's burden.

Magnum Oil, 829 F.3d at 1380.

While not discussed in the Petition (at 67), Petitioner's expert declaration

appears to suggest that Hirayama-307's dialer application window in and of itself

discloses the limitation of claim 15 by virtue of being a window. Ex. 1002

[Bederson-Decl.] ¶ 171. Relying on Exhibit 1015, 1-2, Dr. Bederson states that "one example of a 'shell' under its plain meaning is a 'drawing application.'" *Id*. To the extent that Dr. Bederson's testimony is to be considered, it misses the mark. First, Exhibit 1015 does not even use the word "shell." Dr. Bederson provides no explanation on why a POSITA would understanding a "drawing application" to be a "shell" and at deposition, Dr. Bederson was unable to identify why various application windows may or may not be "shells," thus implicitly admitting that not all application windows are shells. Ex. 2005 [Bederson-Depo.] 169:22-170:8.

Second, there is no logical explanation provided by Dr. Bederson that, even if a drawing window were a "shell" upon an operating system in some other system in an unrelated paper, that means that a dialer window in Hirayama-307 is also a shell upon the operating system.

Third, claim 15 does not merely require the existence of a shell upon the operating system; rather, it requires that the specific computer program code that causes the user interface with the representations of function and the "gliding … away" activation mechanism be implemented as a "shell upon the operating system." In Hirayama-307, even if the dialer application were somehow a shell upon an operating system, that dialer application window is not the "program code" for implementing Hirayama'307's general user interface with the drag-and-drop gesture. Rather, the drag-and-drop operation applies to all programs 40, and

is generally implemented in Hirayama-307's operating system, not as something specific and within the telephone icon 41.

Therefore, the Petition fails to show that claim 15 is disclosed or obvious in view of Hirayama-307.

VI.   CONCLUSION

For the foregoing reasons, Petitioner has failed to demonstrate that any of the claims are unpatentable.

Respectfully submitted,

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Date: March 25, 2022

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITS

This Patent Owner Response (the "POR") consists of 13,425 words, excluding table of contents, table of authorities, certificate of service, this certificate, or table of exhibits. The POR complies with the type-volume limitation of 14,000 words as mandated in 37 C.F.R. § 42.24. In preparing this certificate, counsel has relied on the word count of the word-processing system used to prepare the paper (Microsoft Word).

Respectfully submitted,

/ Parham Hendifar /
_____

Date: March 25, 2022

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the following documents were served by electronic service, by agreement between the parties, on the date signed below:

CORRECTED PATENT OWNER RESPONSE

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